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THE QUANTITY THEORY OF MONEY AND FINANCIAL CRISES: EVIDENCE FROM THE 1997 ASIAN CRISIS

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Abstract

One of the most remarkable features of Asian Crisis is the fact that it has not been anticipated almost by anybody. This paper shows that using the prescription of the quantity theory of money, the crisis could have been forecasted well in advance. The root of Asian crisis is the monetary expansion initiated at the beginning of 1990s, which did not fueled a simple inflationary process, but generated an unsustainable expansion of production.

Keywords: quantity theory, monetary policy, asian crisis, unsustainable expansion of production

Introduction

The Southeast Asian financial crisis has several remarkable features. First, the crisis affected the economies with the strongest economic growth in the world, and subsequently induced the international community to provide the biggest financial assistance in the history. Secondly, it is the most important crisis that affected developing countries after the well known "debt crisis" in 1980s, and (allegedly) the most important crisis that affected the capitalist system after the Great Depression. Thirdly, the crash of Asian financial markets and the region's economic downturn have been almost completely unexpected.

This article shows that using the prescription of the quantity theory of money, the crisis could have been forecasted well in advance. The root of Asian crisis is the monetary expansion initiated at the beginning of 1990s, which did not fueled a simple inflationary process, but generated an unsustainable expansion of production.

Historical prelude

One of the most remarkable features of Asian Crisis is the fact that it has not been anticipated almost by anybody (Radelet and Sachs, 1998). To the extent that a financial crisis was expected, the rating of sovereign bond issues should have

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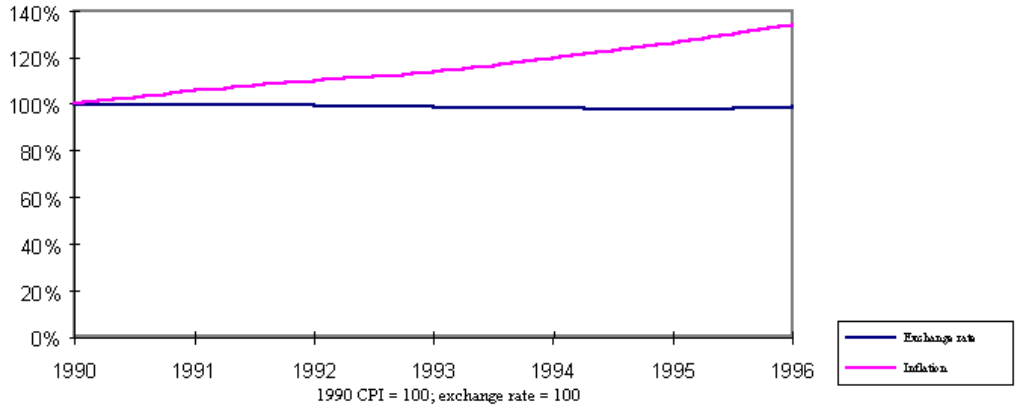
been decreased. Yet sovereign ratings remain unchanged until the summer of 1997, and southeast Asian countries have been downgraded only after the beginning of stock market and foreign exchange market crash.

The essential feature of Asian economic boom in 1990s is the fact that it has relied on a strong credit expansion which, in turn, has been fueled by foreign capital inflows. Domestic monetary authorities have adopted a passive attitude, accepting or even encouraging these flows.

Opening their capital accounts at the beginning of the 1990s, the east Asian states knew that only by attracting foreign investors they could hope to continue the strong economic growth, which had been achieved so far by an autonomous expansion of money supply to support an interventionist industrial development strategy.

The most important element east Asian governments used to attract foreign investors was the currency peg and the consequent elimination of foreign exchange risk. With a fixed exchange rate, an inflow of foreign currency leads automatically to an increase of domestic money supply.

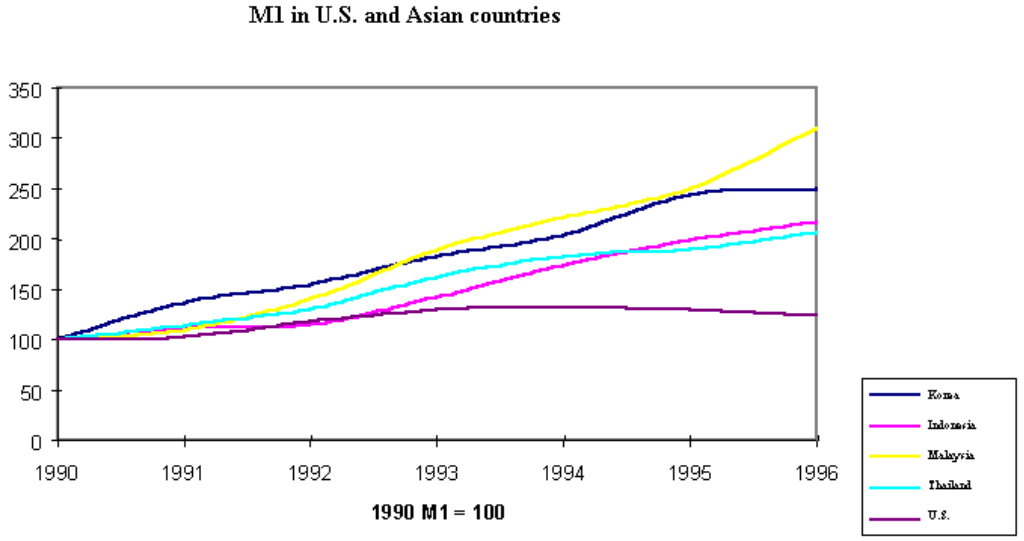
Thailand: inflation, the exchange rate and currency overvaluation



This is a highly problematic policy measure, however, as historical record seems to illustrate.[39] Monetary expansion, in turn, has a booming influence either on prices or on imports. In Asian countries, inflation continued to be a familiar phenomenon, although figures indicated a rather weak rise in prices. However, in time, the gap between the exchange rate (the external value of currency) and the purchasing power of money widened, indicating a significant currency

[39] See Meigs for a discussion of how fixed exchange rate policy contributed to the occurrence of Mexican Crisis.

overvaluation. Unlike the experience of Latin American hyperinflation in the 1980s, in Asian countries, the excessive quantity of money served to finance an increasing amount of imports. A chronic current account deficit could be seen in all South East Asian countries.



To keep the exchange rate unchanged, Asian monetary authorities had to multiply the money supply, between 1990 and 1997, by 1.7 times in Korea, 2 times in Thailand, 2.6 times in Indonesia and over 3 times in Malaysia. The currency pegging made the control of money supply much more difficult than it could have been if the exchange rate were free to fluctuate. If local currencies appreciated, exporters would have worried about their competitiveness, but on the other hand, domestic buyers could have get foreign commodities at a lower price.

At the middle of 1997, IMF reports were very optimistic. Despite some minor problems and several insignificant recommendations, the board of IMF was "impressed" by the macroeconomic achievements of Asian countries and congratulated their governments for the ability with which they have managed to mix economic boom and monetary stability. After the crash, western policymakers and analysts were unhappy about the how "the watchdog of the international monetary system" fulfilled its mission.

It should have been clear that the fall of Asian financial markets and the overall economic downturn has been not only a phenomenon that could have been forecasted well in advance, but also an unavoidable byproduct of the Asian development model. Retrospectively, the Asian crisis can be handled as a historical case the analytical content of which has been raised (and solved) decades ago. Is the economic boom anything but the manifestation of monetary

phenomenon? For those who understood the causes of the Great Depression – an economic downturn that followed a period of strong economic expansion and no inflation – Asian crisis has been just another example of how monetary mismanagement can drive the economy down.

Asian crisis and monetarist considerations

In what follows, I will show that Asian crisis could have been forecasted. Moreover, I will show that this prediction could be made using the insights of the quantity theory of money, a body of thought which represents the foundation of macroeconomic stabilization policies promoted by IMF.

Based on the equation of exchange

$$M \times V = P \times Q$$

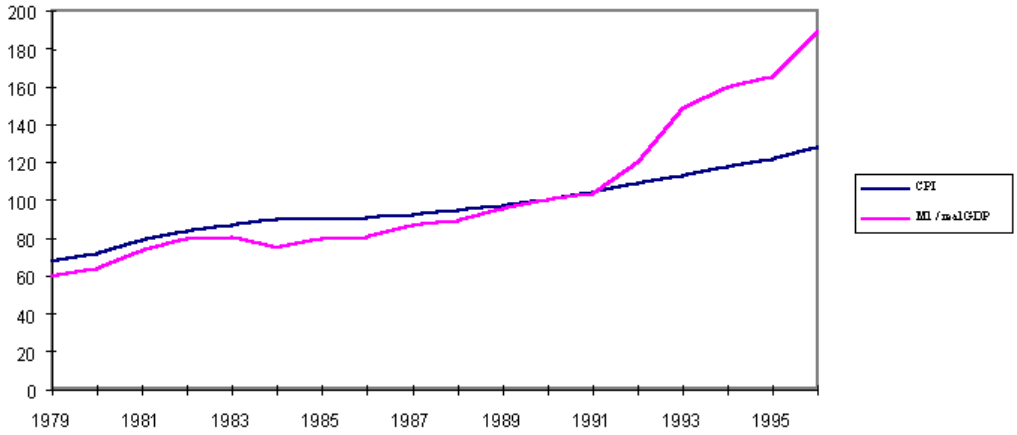
the quantity theory of money asserts that changes in money supply will have no influence on production ("money is neutral") and the velocity of money remains unchanged in the short run. Therefore, any increase (or decrease) in M will deliver a proportional increase (or decrease) in P.

In essence, my task is pretty simple. I have used a simple technique to analyze the relation between the quantity of money, GDP and inflation. This method is similar to that used by Milton Friedman in its classical book *Dollars and Deficits*. Before explaining the method and showing the results, a short clarification is needed. While Friedman used the technique to obtain an empirical confirmation of the quantity theory of money (in US, Great Britain, Germany and Japan), I will begin precisely from the hypothesis the quantity theory of money is true and show the serious imbalance that developed in Asian economies (Malaysia and Korea) after 1990.

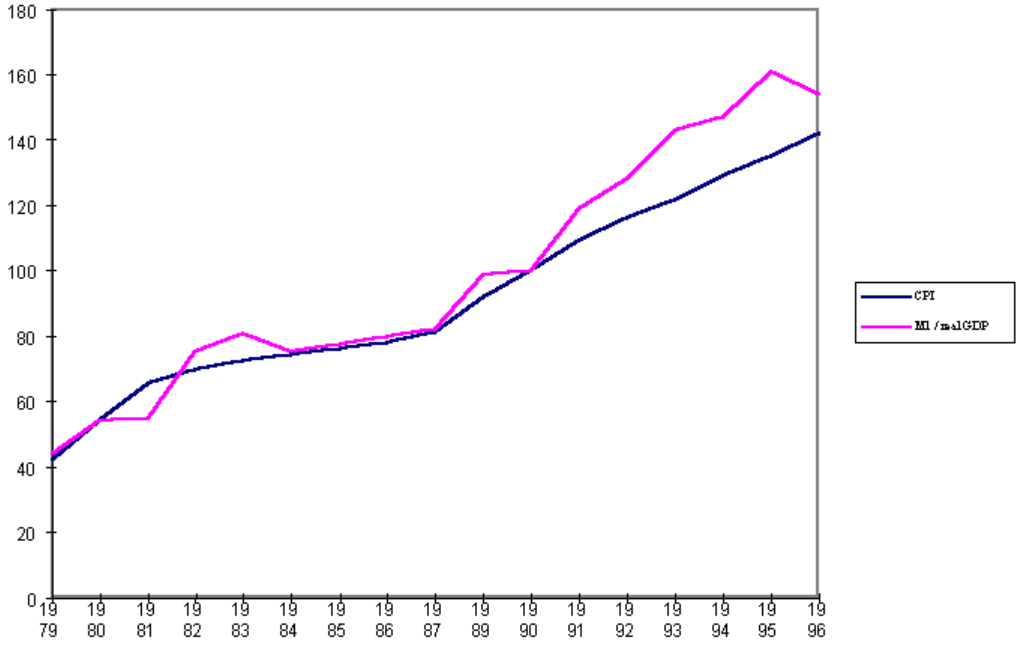
I have built two curves, one indicating the evolution of inflation, the other the evolution of the quantity of money per production unit. The inflation curve represents the evolution of the consumer price index, considering the reference point 1990 (when CPI is 100). For example, in 1987 in Malaysia the price level was 92.4% relative to 1990; that is prices were on average 7.6 percentage points lower than in 1990.

The second curve represents the evolution of the ratio between money supply as measured by M1 and real GDP (as measured in 1990 prices). More precisely, I have divided each year nominal GDP by the price index (current year/1990) and obtained the evolution of real GDP. For example, in Korea in 1993, GDP in 1990 prices is obtained by dividing nominal GDP (265 948 billion won) to 1990-based CPI and equals 218 528 billion won. Then I have divided each year M1 to the real GDP and represented the resulted ratios in the figures below.

MALAYSIA



KOREA



The monetarist idea is that any additional monetary unit will reflect eventually in prices, and thus the two curves should be identical or follow each other closely. When the quantity of money per unit of production increases, prices in increase also. This correlation is the main insight of the quantity theory of

money. Indeed, it can be noticed that by 1990, there seemed to be no serious monetary disequilibrium in the two economies. In 1980s, we can see a clear correlation between money and prices in both countries. After 1990, the money supply increases significantly, especially in Malaysia, while prices manifest some inertia. Thus, at the end of 1995 we can see an important gap between the quantity of money injected in the economy and its weak impact on prices. From a monetarist perspective, it should have been obvious that it was only a matter of time until the two curves will meet again. The higher the gap, the more important the necessary adjustment that had to come.

The difference of tens of percentage points reflected in the stock and foreign exchange market crash in the summer 1997 and, of course, in the subsequent exploding inflation rate.

In conclusion, the Asian crisis is a good case study for the students of the quantity theory of money.

Conclusions

The Asian crisis was largely unexpected by investors, analysts and public officials. This paper shows that the quantity of money is a useful tool for analyzing the crisis. Based on the hypothesis that any increase of the money supply will sooner or later reflect in the price level, Asian economies manifested a grave disequilibrium in the 1990s and a correcting crisis was unavoidable. Ex post, although the Asian crisis was, in its details, the result of a complex network of political, social and economic factors, it remains essentially a monetary phenomenon. It is very surprising then, why it has not been forecasted and prevented.

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